

WHAT IS CLAIMED IS

5.6 A₁ } 1. A communication apparatus for forming and outputting image data on the basis of data received via a network, comprising:

5 receiving means for receiving data composed of a predetermined character code;

extracting means for analyzing the data received by said receiving means and extracting binary data encoded by the character code; and

10 converting means for converting the binary data extracted by said extracting means into image data.

2. The apparatus according to claim 1, further comprising:

15 first determining means for determining whether the binary data is convertible into image data; and

control means for transmitting, if said first determining means determines that the binary data is inconvertible, the binary data to an external apparatus and requesting said external apparatus to convert the
20 binary data into a format convertible by said communication apparatus.

5.6 A₂ } 3. The apparatus according to claim 2, wherein if said extracting means extracts a plurality of types of binary data, said control means selects only binary data
25 found to be inconvertible by said first determining

means and requests said external apparatus to convert the selected binary data.

4. The apparatus according to claim 2, wherein said control means requests said external apparatus to
5 convert into binary data encoded by ITU-T recommendation T.4 or image data encoded by a predetermined encoding method such as JPEG etc.

5. The apparatus according to claim 2, wherein said first determining means determines on the basis of
10 information pertaining to the binary data, which is extracted from a character data portion other than the binary data in received character data.

6. The apparatus according to claim 5, wherein said first determining means determines on the basis of
15 information pertaining to the binary data, which is extracted from header information of received MIME data.

7. The apparatus according to claim 1, further comprising:

second determining means for determining, during a
20 receiving session by said receiving means, whether the binary data is convertible into image data; and

first informing means for informing a source of the received data of the determination result from said second determining means during the receiving session.

25 8. The apparatus according to claim 7, wherein

said receiving means receives data by an Electric mail protocol; and

said first informing means informs by using a response signal in the Electric mail protocol.

- 5 9. The apparatus according to claim 7, further comprising:

second informing means for transmitting, if said second determining means determines that the data is inconvertible, a message concerning the information
10 transmitted by said first informing means in another session after the receiving session is completed.

10. The apparatus according to claim 9, further comprising:

determining means for determining a language type
15 of said source of the received binary data, which is extracted from a character data portion other than the binary data,

wherein said second informing means transmits a message corresponding to the language type determined by
20 said determining means.

11. The apparatus according to claim 7, further comprising:

third determining means for determining, during the receiving session by said receiving means, whether
25 the binary data encoded by the character code can be decoded,

wherein said first informing means informs said source of the received data of the determination result from said third determining means during the receiving session.

- 5 12. The apparatus according to claim 11, wherein said receiving means receives data by an Electric mail protocol, and

said first informing means informs by using a response signal in the Electric mail protocol.

- 10 13. The apparatus according to claim 11, further comprising:

third informing means for transmitting, if said third determining means determines that the data is inconvertible, a message concerning the information transmitted by said first informing means in another session after the receiving session is completed.

- 15 14. The apparatus according to claim 13, further comprising:

20 second determining means for determining a language type of said source of the received binary data, which is extracted from a character data portion other than the binary data,

wherein said third informing means transmits a message corresponding to the language type determined by
25 said second determining means.

15. A method of forming and outputting image data on the basis of data received via a network, comprising the steps of:

- receiving data composed of a predetermined
- 5 character code;
- analyzing the received data and extracting binary data encoded by the character code;
- converting the extracted binary data into image data; and
- 10 outputting the converted image data.

16. The method according to claim 15, further comprising the steps of:

- determining whether the binary data is convertible into image data and outputting a first determination
- 15 result; and
- transmitting, if the first determination result indicates that the binary data is inconvertible, the binary data to an external apparatus and requesting said external apparatus to convert the binary data into a
- 20 format convertible by an apparatus comprising the method.

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17. The method according to claim 16, wherein if a plurality of types of binary data are extracted, only binary data found to be inconvertible by the first determination result is selected, and said external
25 apparatus is requested to convert the selected binary data.

18. The method according to claim 15, wherein said external apparatus is requested to convert into binary data encoded by ITU-T recommendation T.4 or image data encoded by a predetermined encoding method such as JPEG etc.

19. The method according to claim 15, wherein the determination for outputting the first determination result is performed on the basis of information pertaining to the binary data, which is extracted from a character data portion other than the binary data in received character data.

20. The method according to claim 18, wherein the determination for outputting the first determination result is performed on the basis of information pertaining to the binary data, which is extracted from header information of received MIME data.

21. The method according to claim 15, further comprising the steps of:

determining, during a receiving session by receiving means, whether the binary data is convertible into image data, and outputting a second determination result; and

informing a source of the received data of the second determination result during the receiving session.

22. The method according to claim 21, wherein

said receiving means receives data by an Electric mail protocol; and

the second determination result is transmitted by using a response signal in the Electric mail protocol.

- 5 23. The method according to claim 21 further comprising the step of:

transmitting, if the second determination result indicates that the data is inconvertible, a message concerning the second determination result in another session after the receiving session is completed.

24. The method according to claim 23, further comprising the step of:

determining a language type of said source of the received binary data, which is extracted from a character data portion other than the binary data,

wherein a message corresponding to the determined language type is transmitted in another session.

25. The method according to claim 21, further comprising the step of:

20 determining, during the receiving session by said receiving means, whether the binary data encoded by the character code can be decoded, and outputting a third determination result,

wherein said source of the received data is informed of the third determination result during the receiving session.

26. The method according to claim 25, wherein
said receiving means receives data by an Electric
mail protocol, and

5 said first informing means informs by using a
response signal in the Electric mail protocol.

27. The method according to claim 25, further
comprising the step of:

10 transmitting, if the third determination result
indicates that the data is inconvertible, a message
concerning the third determination result in another
session after the receiving session is completed.

28. The method according to claim 27, further
comprising the step of:

15 determining a language type of said source of the
received binary data, which is extracted from a
character data portion other than the binary data,

wherein a message corresponding to the determined
language type is transmitted in another session.

20 ~~29.~~ A storage medium storing a computer program to be
executed by a computer of a communication apparatus for
forming and outputting image data on the basis of data
received via a network, said computer program comprising
the steps of:

25 a process of receiving data composed of a
predetermined character code;

a process of analyzing the received data and extracting binary data encoded by the character code;

a process of converting the extracted binary data into image data; and

5 a process of outputting the converted image data.

30. The medium according to claim 29, further comprising the step of:

a process of determining whether the binary data is convertible into image data and outputting a first
10 determination result; and

transmitting, if the first determination result indicates that the binary data is inconvertible, the binary data to an external apparatus and requesting said external apparatus to convert the binary data into a
15 format convertible by an apparatus comprising the medium.

31. The medium according to claim 29, wherein if a plurality of types of binary data are extracted, only binary data found to be inconvertible by the first determination result is selected, and said external
20 apparatus is requested to convert the selected binary data.

32. The medium according to claim 30, wherein said external apparatus is requested to convert into binary data encoded by ITU-T recommendation T.4 or image data
25 encoded by a predetermined encoding method such as JPEG etc.

33. The medium according to claim 30, wherein the determination for outputting the first determination result is performed on the basis of information pertaining to the binary data, which is extracted from a character data portion other than the binary data in received character data.

34. The medium according to claim 30, wherein the determination for outputting the first determination result is performed on the basis of information pertaining to the binary data, which is extracted from header information of received MIME data.

35. The medium according to claim 30, further comprising the steps of:

a process of determining, during a receiving session by receiving means, whether the binary data is convertible into image data, and outputting a second determination result; and

a process of informing a source of the received data of the second determination result during the receiving session.

36. The medium according to claim 35, wherein

said receiving means receives data by an Electric mail protocol; and

the second determination result is transmitted by using a response signal in the Electric mail protocol.

37. The medium according to claim 35, further comprising the step of:

5 a process of transmitting, if the second determination result indicates that the data is inconvertible, a message concerning the second determination result in another session after the receiving session is completed.

38. The medium according to claim 37, further comprising the step of:

10 a process of determining a language type of said source of the received binary data, which is extracted from a character data portion other than the binary data, wherein a message corresponding to the determined language type is transmitted in another session.

15 39. The medium according to claim 35, further comprising the steps of:

a process of determining, during the receiving session by said receiving means, whether the binary data encoded by the character code can be decoded, and
20 outputting a third determination result; and

a process of informing said source of the received data of the third determination result during the receiving session.

40. The medium according to claim 39, wherein

25 said receiving means receives data by an Electric mail protocol, and

said first informing means informs by using a response signal in the Electric mail protocol.

41. The medium according to claim 39, further comprising the step of:

5 a process of transmitting, if the third determination result indicates that the data is inconvertible, a message concerning the third determination result in another session after the receiving session is completed.

10 42. The medium according to claim 41, further comprising the step of:

a process of determining a language type of said source of the received binary data, which is extracted from a character data portion other than the binary data,

15 wherein a message corresponding to the determined language type is transmitted in another session.

~~43.~~ A communication apparatus comprising:

receiving means for receiving electronic mail;

20 extracting means for analyzing the electronic mail received by said receiving means and extracting binary data attached to the electronic mail;

converting means for converting the binary data extracted by said extracting means into image data; and

25 output means for outputting the image data converted by said converting means.

44. The apparatus according to claim 43, wherein if
said converting means detects that the binary data is
inconvertible into image data, the binary data is
transmitted to an external apparatus, and said external
5 apparatus is requested to convert the binary data into a
format convertible by said converting means.

45. The apparatus according to claim 43, wherein if
during a receiving session of the electronic mail said
converting means detects that the binary data is
10 inconvertible into image data, a source of the
electronic mail is informed of conversion error during
the receiving session.

46. The apparatus according to claim 43, wherein if
said converting means detects that the binary data is
15 inconvertible into image data, said source of the
electronic mail is informed of conversion error by
electronic mail after said receiving means completes the
receiving session.

47. The apparatus according to claim 46, wherein a
20 language type of said source is determined from header
information of the electronic mail received by said
receiving means, and electronic mail indicating the
conversion error is generated by a message corresponding
to the determined language type.

48. A method of forming and outputting image data on the basis of received electronic mail, comprising the steps of:

receiving electronic mail;

5 analyzing the received electronic mail and extracting binary data attached to the electronic mail;

converting the extracted binary data into image data; and

outputting the converted image data.

SSA. } 10 49. The method according to claim 48, wherein if the binary data is found to be inconvertible into image data, the binary data is transmitted to an external apparatus, and said external apparatus is requested to convert the binary data into a format convertible by an apparatus
15 comprising the method.

50. The method according to claim 48, wherein if during a receiving session of the electronic mail the binary data is found to be inconvertible into image data, a source of the electronic mail is informed of
20 conversion error during the receiving session.

51. The method according to claim 48, wherein if the binary data is found to be inconvertible into image data, said source of the electronic mail is informed of conversion error by electronic mail after said receiving
25 means completes the receiving session.

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52. The method according to claim 51, wherein a language type of said source is determined from header information of the received electronic mail, and electronic mail indicating the conversion error is
5 generated by a message corresponding to the determined language type.

53. A method of forming and outputting image data on the basis of received electronic mail, comprising:

- receiving electronic mail;
- 10 analyzing the received electronic mail and extracting binary data attached to the electronic mail;
- converting the extracted binary data into image data; and
- outputting the converted image data.

15 54. The method according to claim 53, wherein if the binary data is found to be inconvertible into image data, the binary data is transmitted to an external apparatus, and said external apparatus is requested to convert the binary data into a format convertible by an apparatus
20 comprising the method.

55. The method according to claim 53, wherein if during a receiving session of the electronic mail the binary data is found to be inconvertible into image data, a source of the electronic mail is informed of
25 conversion error during the receiving session.

56. The method according to claim 53, wherein if the binary data is found to be inconvertible into image data, said source of the electronic mail is informed of conversion error by electronic mail after said receiving means completes the receiving session.

57. The method according to claim 56, wherein a language type of said source is determined from header information of the received electronic mail, and electronic mail indicating the conversion error is generated by a message corresponding to the determined language type.

58. A communication apparatus comprising:
 (a) input means for inputting data;
 (b) first determining means for determining whether the input data is non-image data or image data;
 (c) second determining means for determining whether the non-image data is convertible into image data; and
 (d) processing means for performing a converting process if the non-image data is convertible.

59. The apparatus according to claim 58, further comprising:
 (e) means for sending a conversion request to another apparatus if the determination result from said second determining means indicates that the non-image data is inconvertible.

60. The apparatus according to claim 58, wherein the non-image data is data composed of a character code.
61. The apparatus according to claim 60, wherein the character code data contains binary data converted into a character code.
- 5 62. The apparatus according to claim 58, wherein said data converting means comprises bit map data forming means for converting a character code into bit map data.
63. The apparatus according to claim 61, wherein said data analyzing means comprises character data analyzing means for discriminating between the binary data portion and other portion.
- 10 64. The apparatus according to claim 61, wherein said data converting means comprises at least one of decoding means for decoding the binary data portion into original binary data and data rasterizing means for forming image data by rasterizing the decoded binary data.
- 15 65. The apparatus according to claim 58, wherein the electronic data is received in accordance with TCP/IP or SMTP.
- 20 66. The apparatus according to claim 61, further comprising language determining means for determining a language type of the character code.
67. The apparatus according to claim 65, wherein the electronic data is described in MIME format.
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68. The apparatus according to claim 67, further comprising content analyzing means for detecting a language type and an address of a source from the electronic mail.

5 69. The apparatus according to claim 68, wherein said content analyzing means divides, by using MIME header information, received electronic information composed of a character code into a character code portion and a binary data portion converted into the character code.

10 70. The apparatus according to claim 68, further comprising error report forming means for transmitting, if error to be reported to said source occurs during the course of outputting the image data, an error report describing a content of the error by a character code
15 corresponding to the detected language type to the source address detected by said content analyzing means.

71. The apparatus according to claim 68, wherein said content analyzing means detects the language type and the address from an MIME header.

20 72. The apparatus according to claim 58, wherein the data contains image data encoded in accordance with a facsimile transmission standard.